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a small increase or decrease in the listing of moneys and credits in 1911 cannot, therefore, be accurately determined. At any rate the amount for all practical purposes was about stationary. Since 1911, however, there has been a slow but constant increase, from \$188,773,772 in 1912 to \$250,218,178 in 1914 and \$275,361,750 in 1915.

For reasons already outlined, the amount of corporate stock listed as moneys and credits is almost a negligible quantity. The small sum of \$5,507,454 separately listed as corporation stock, the same not being "otherwise provided" for, is also instructive. To locate and place corporation stock, especially shares of stock held in foreign corporations, on the assessment roll, requires a modern system of administration, not a plan of assessment and equalization worked out during the period 1853-1873.

In conclusion, it may be safely alleged that the statistics presented, when judged with reference to actual facts and conditions, do not represent a criticism of the underlying principles of the flat rate tax. In my judgment, the rate should be reduced to three mills and the provision granting a deduction of debts from the actual value of moneys and credits repealed. With these changes made and an up-to-date plan of fiscal administration introduced, more revenue would no doubt be secured and in other respects better results attained.

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## DOES CONSERVATION INVOLVE COST?

It is almost universally agreed that a very large degree of conservation of natural resources would be desirable were it not for the burden which it is assumed must be placed upon the present in order to benefit the future. The usual line of argument is, in substance, as follows. If we set aside forest reserves today, it makes lumber dear. If we insist that in

mining coal as little waste as possible be incurred, it means high-priced fuel. If we require that the low-grade ore in an iron mine be fully utilized in place of being wasted, it means dearer iron and steel products. In every case, the present generation is called upon to make a sacrifice in order to benefit the people of the future centuries. Conservation, then, resolves itself into a question of altruism; of the amount of sacrifice we are willing to undergo for the sake of generations yet unborn.

This line of argument appears at first practically unassailable. Upon closer analysis, however, it may be seen that it fails to take into consideration one of the essential factors — the laws governing the growth of population.

In any nation, population tends to expand through excess of births over deaths until a certain degree of tension or pressure upon the available natural resources is reached. When this degree of tension is attained, the birth rate and death rate become equal and population remains stationary so far as internal forces are concerned.

The degree of population density at which equilibrium for the native-born population is attained varies directly with the advancement in those phases of scientific knowledge which teach the ways and means of extracting the greatest annual product from the available natural resources and inversely with the number of comforts and luxuries included in the standard of living of the lower classes of the population. If the standards of comfort are firmly entrenched in the minds of the masses of the people, any exhaustion or diminution in the natural resources will be accompanied by a falling birth rate and a contraction of population corresponding to the decrease in the resources available.

Population equilibrium under varying circumstances is well illustrated by existing conditions in China, India, France, and the United States, in each of which countries the native population is or has been almost static. China apparently has few more inhabitants today, if any more, than a thousand years ago.<sup>1</sup> In her case, migration has, for centuries, played

<sup>1</sup> See article by Professor Walter F. Willcox in the *American Economic Review*, December, 1915, p. 744.

a small part and the standard of living has apparently been remarkably constant at a plane not far above the subsistence level. As a result, we find a dense population with a high birth rate kept in equilibrium by an equally high death rate.

The population of India, like that of China, probably remained stationary and almost on a subsistence level for many centuries. But, just as some new uplift of an ancient peneplain through which the rivers, having long since cut to base level, have flowed on lazily for ages, will once more transform the sluggish streams into dashing torrents, so the sudden introduction of European methods of agriculture and industry has enabled a larger number of people to subsist by aid of the same natural resources and, hence, during the last few decades, has given rise to a marked increase in numbers.

Before the present war, France had attained an approximate equality between births and deaths; but both the birth rate and the death rate were low, and, while the number of inhabitants per square mile was large, the pressure of population on resources was much less intense than in China. The scientific knowledge of the French people enabled them to utilize their resources in a way which enabled a rather dense population to turn out a per capita product large enough to permit of a moderately advanced standard of living.

The American Indians in 1492 had probably reached a state of equilibrium between numbers and resources; for, with their primitive methods, even a soil as wonderfully fertile as that of America would yield only a most scanty livelihood to a small number of persons. The improved methods of the Europeans revolutionized all this and enabled the same area to support an immensely larger population, even tho the new-comers possessed much higher standards of living. During the centuries necessary to occupy the unbroken wilderness, resources were so superabundant that American ideals of the comforts imperatively necessary were elevated far above the standards of living of the Pilgrim fathers, and these new ideals became firmly fixed in the mental fiber of the people of the United States. With these exceptionally high standards permeating the masses of the people, the

native white population has reached a static condition with a very low density or slight degree of pressure upon resources.

None the less, altho the native population is static, the number of inhabitants in the United States still continues to increase rapidly, both through actual immigration and through the fecundity of the more recent arrivals. This illustrates the fact that the balance between population and resources is dependent not merely upon the standards of living of the country itself, but upon the standards of surrounding nations from which immigrants may come freely. Unless restrictions are imposed upon immigration to this country, the final equilibrium is likely to be based upon the standards of living of East Europe or Asia Minor rather than upon those established by the descendants of the early settlers in America.

The important thing for the present discussion is that equilibrium will eventually be reached upon the basis of some definite standard of living, whether the standard be that of America or of Eastern Europe. American standards would result in a population for the United States of perhaps a hundred millions, or about our present numbers. Eastern European standards would perhaps give two hundred and fifty millions a few decades hence. Chinese or Hindoo standards would perhaps lead to an ultimate number of five hundred millions of people at a still later date.

Suppose now, that in 1789 the United States Government had adopted and carried out a fixed policy of closing to entry half of the mines, half of the forests, and half of the farm lands throughout its entire domain. What would have been the result? There is no reason to suppose that the development of the American standard of living would have been in any way affected. But with the resources open to exploitation so much more limited in quantity, the native population would have come to a standstill at an earlier date, with perhaps a total of fifty millions. With European migration unrestrained, equilibrium would be reached at perhaps a hundred and twenty-five millions — about half the population previously assumed under European standards. With

an unrestricted flow of people from Asia, the balance between population and resources would probably occur at a figure somewhere near two hundred and fifty millions, or half the number arrived at with all resources freely available.

In any case, the final results would presumably be that, after equilibrium was attained, the people would be living in almost the same circumstances as if the government had opened the entire area to development. The only difference would be that population would become stationary at an earlier date.

Considering cost in the sense of disutility — the only sense in which it has any meaning for present purposes — it is hard to see that the hypothetical conservation policy here assumed involved serious cost to anyone. Such cost as was incurred was due to restriction of population — to the pleasure loss resulting from rearing small rather than large families. It is doubtful, however, whether the extra numbers in a large family do not, on the average, cause as much sacrifice as pleasure. If this is true, the supposed conservation policy involved no cost whatever.

The same reasoning would apply to the setting aside by the government of resources unused at the present time. Such a policy would not involve cost or sacrifice, but merely a hastening of the day when population would become stationary. Even tho the resources conserved are now in the hands of private owners, the principle would in no wise be affected from the standpoint of the nation as a whole; tho it is undoubtedly true that the purchase of these resources by the government for purposes of conservation would bring about some changes in the wealth distribution among the families of the nation.

From the line of reasoning given above, it similarly follows that the reservation of great forest or game preserves, of national parks and playgrounds, or even of great private estates such as exist in England, burdens the mass of the people with no sacrifices except such as may be connected with population restriction. The opening up of such areas to cultivation would not enhance the public welfare, but would

merely take away the gratification now derived from the use of these lands as pleasure resorts and the enjoyment at present received from the scenic beauties of the uncultivated tracts.

It appears, then, that the ultimate test of the extent to which conservation should be carried turns not upon any question of cost to the present generation but upon that of military necessity. The more resources conserved, the less the ultimate population and the fewer the soldiers to be called upon in case of war. But wars nowadays are settled as much by abundant resources and wealth as by the number of men available for the army. The best militaristic policy is not necessarily that of gaining population by a lavish use of the gifts of nature. China and India have so overdrawn upon their natural resources that their poverty does not permit them to equip an efficient army. On the other hand, a nation might set its standards of living so high and conserve so many of its natural riches that its population would be too small for self-protection and its conserves would become the booty of less thrifty but more populous neighbors.

In settling upon the best conservation policy, therefore, both political and economic aims must be kept in mind. With the present national area and population, the people of the United States apparently have little to fear from foreign aggression, if the average wealth and prosperity of the inhabitants is maintained unimpaired. Granting this assumption, and assuming further that we were to shut off immigration, we might proceed with a rigorous conservation policy without fear of placing any considerable burden upon the shoulders of the present or the next generation and without danger of materially lowering our present standards of comfort.

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